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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,814	12/28/2001	William Brandt Goldsworthy		3292

7590

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EXAMINER

NGUYEN, CHAU N

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 03/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/037,814

Applicant(s)

GOLDSWORTHY ET AL.

Examiner

Chau N Nguyen

Art Unit

2831

BW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 19-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 19-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Renumbering the Claims

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 20-29 have been renumbered as 19-28.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant (3,324,233) in view of Olsson (5,808,239).

Bryant discloses an electrical current carrying conductor for long distance transmission of electrical current, the current carrying conductor comprising a relatively solid central core (16) being sufficiently cross-section size to support the tensile loading on the conductor, an outer highly conductive electrical current carrying sheath completely surrounding the central core for carrying electrical current over the long distance.

Bryant does not specifically disclose the central core (16) being formed of a fiber containing reinforced composite material to carry the entire loading so that the current carrying sheath carries only a small amount of tensile loading. Olsson discloses an electrical cable comprising a relatively solid central load carrying core (28) being formed of a fiber containing reinforced composite material. It would have been obvious to one skilled in the art to use the fiber containing reinforced

composite material as taught by Olsson for the central core (16) of Bryant to improve the tensile strength in the cable since the fiber containing reinforced composite material taught by Olsson provides strength and resilience. Noted that the features of the fiber containing core carrying the entire loading carried by a steel core in a conventional cable and the current carrying sheath carrying only a small amount of tensile loading are disclosed in the modified conductor of Bryant since it comprises structure and material as claimed.

Re claim 2, it would have been obvious to one skilled in the art to use aluminum (not aluminum alloy) for the conductive outer sheath of Bryant since aluminum is a well-known conductor in the cable art for its highly electrical conductivity.

Re claim 3, although not specifically disclosed by Olsson, it would have been obvious to one skilled in the art to use a fiber containing reinforced composite material having a plurality of aligned reinforcing fibers embedded in a thermoplastic composite matrix for the modified composite material of Bryant since composite materials having aligned fibers embedded in a thermoplastic matrix are known in the art for being used as central load cores. Examiner takes Official Notice.

5. Claims 4-12 and 19-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant in view of Olsson as applied to claim 1 above, and further in view of Saito et al. (4,770,489).

The modified conductor of Bryant discloses the invention substantially as claimed including features recited in claims 8-11, 20, 21, 25 and 27. The modified conductor of Bryant does not disclose the central load carrying core being comprised of a plurality of individual sections which are capable of being separated from one another (re claims 4, 7, 22), which are concentrically arranged to form a cylindrical shaped conductor core (re claims 5, 23), which are somewhat trapezoidal shaped and abutted against one another to form a central bore sized to receive a fiber optic cable (re claims 6, 12, 19, 24, 26, 28).

Saito et al. discloses a cable comprising a load carrying core (58, Fig. 3B) being comprised of a plurality of individual sections which are capable of being separated from one another, which are concentrically arranged to form a cylindrical shaped core, which are somewhat trapezoidal shaped and abutted against one another to form a central bore sized to receive a fiber optic cable. It would have been obvious to one skilled in the art to apply the teaching of Saito et al. in the modified conductor of Bryant by modifying the load carrying core (of Olsson) with a plurality of individual sections which are capable of being separated

from one another, which are concentrically arranged to form a cylindrical shaped core, which are somewhat trapezoidal shaped and abutted against one another to form a central bore sized to receive a fiber optic cable, to improve the flexibility of the cable and to provide additional transmission purpose in the cable (with the optical fiber).

Response to Arguments

6. Applicant's arguments with respect to claims 1, 7 and 19 have been considered but are moot in view of the new ground(s) of rejection except for the following.

In response to applicant's argument that the core of Bryant is not for carrying any tensile load and the cable of Olsson is a push-cable, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicant argues that the core 54 in Olsson is the actual push rod itself, and the composite sleeve 28 merely surrounds and protects the push rod 54. In

response to this argument, Olsson does disclose "28" being a rod which can be a solid rod or a hollow tube with a bore being shown in phantom lines 54 (col. 4, line 66 through col. 5, line 4). Accordingly "28" is a solid rod, "54" is a bore of a hollow tube. Applicant then argues that the composite push rod 28 is not of a rigid type construction which would allow for carrying any significant amount of load. This argument is not found persuasive. The claimed invention broadly recites a "solid high tensile strength central load carrying core being formed of a fiber containing reinforced composite material and being sufficient cross-section size to support the high tensile loading on the conductor". Olsson discloses a central core being formed of a fiber containing reinforced composite material and having sufficient cross-section size. Olsson also discloses the fiber composite material providing a suitable amount of strength and resilience. Therefore, the composite rod 28 of Olsson would allow for carrying a significant amount of load. If the applicant insists that the rod of Olsson would not allow for carrying any significant amount of load, then applicant should show a structural difference between the claimed invention and the rod of Olsson.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed

invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the suggestion to do so is found in the references themselves, see Olsson col. 3, lines 43-44).

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chau N Nguyen
Primary Examiner
Art Unit 2831